

## ABSTRACT

A transmitted signal and a received signal are combined and the combination is expected to determine whether or not a target signal is present.

5 Either the transmitted signal or the received signal is combined with an auxiliary signal containing a range of frequencies corresponding to an anticipated Doppler shift, so that an output of the combined transmitted and received signal will be present only if a target signal exhibiting a Doppler shift within the anticipated range is present. The auxiliary signal preferably

10 comprises finite-duration signal portions of different types so as to provide a substantially uniform frequency response throughout the selected range.